ZS Series (Clip-on)

Operating Instruction
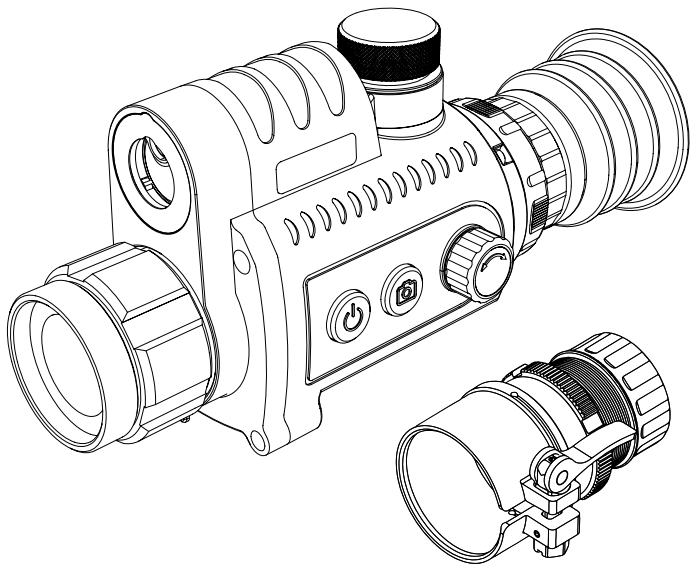
Catalogue

Interface Description

1. Switch
2. Picture/Video
3 . Knob button
4 . Focal length Lens Ring
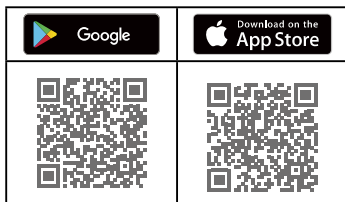5 . Eyepiece Lens Ring
6 . Removable battery tube
7 . Rangefinder
8 .Type-c interface
9 . Bracket Retaining port

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[QR code]	[QR code]

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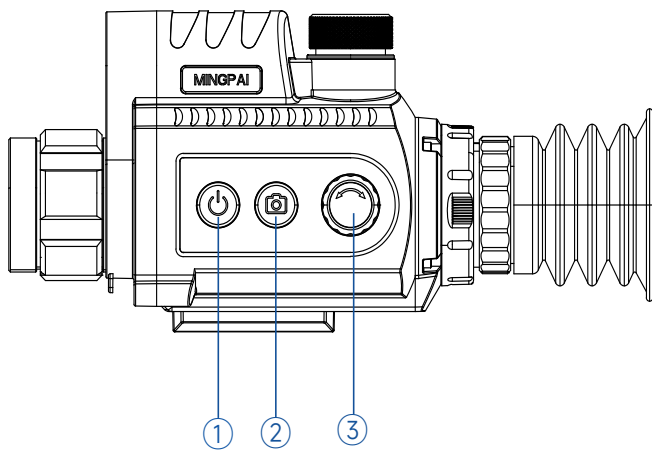
Button Function Description

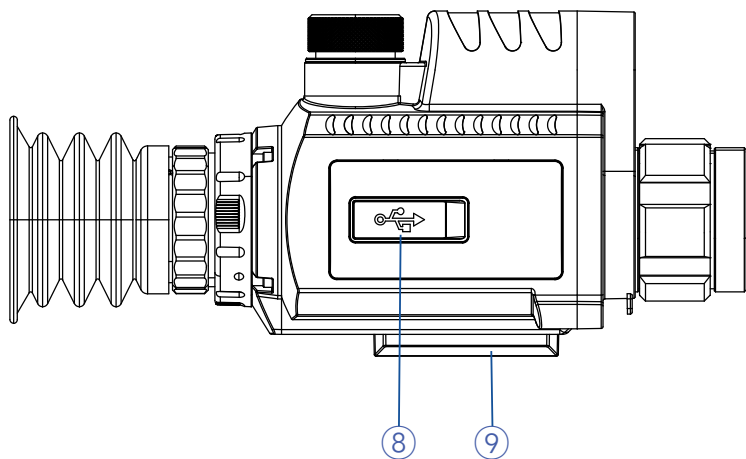| Button	Icon	Situation	Press	Hold on	Forward	Backward
Switch (1)		Turn off	-	Turn on	-	-
		Turn on	Shutter correction	Turn off		-
		In menu	Quit	-	-	-
Record (2)		Turn on	Picture	Video Record	-	-
Spin Button (3)		Turn on	Shortcut Menu	Menu	Digital Zoom	change pseudo color
		Shortcut Menu	confirm	-	Menu up	Menu down
		Menu settings	confirm	-	Menu up	Menu down
		Turn on	-	Turn on/off Rangefinder	-
		Turn on	-	Turn on/off Accelerometer	

Start using

-Before first use, insert the full 18650 battery into the battery case (6) along the guide rail
-Open the lens cap and press the on/Off button (1) to turn on the device.
-Adjust the eyepiece Lens ring (5) until the symbol on the display is clear.
-Rotate the Focus Length Lens ring (4) to focus on the subject.
-After use, press and hold the on/Off button (1) to turn off the device

Status Bar Description

A ⊥100m   🌲   1.0X   White Hot   ⬠   📶   🔋   13:26

(1)   (2)   (3)   (4)   (5)   (6)   (7)   (8)   (9)

1.Configuration files
2.Return to zero distance
3.scene mode
4.Digital Zoom
5.pseudo color
6.DDE
7.WIFI Situation

8.Battery Situation
9.Time

Shortcut Menu Description

A ⊥100m   🌲   1.0X   White Hot   ⬠   📶   🔋   13:26

Brightness

White Hot ····· 🌓

2 ····· ◐

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3 ····· ☀
∨

1x ····· 🔍

User ····· ⥥

4
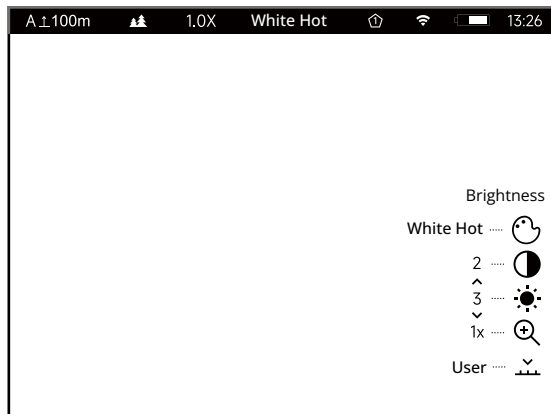
⬤	pseudo color (White hot、Black hot、Fusion hot、Red hot**)**
◑	Switching contrast from level 1-10
☀	Switching brightness from level
⊕	Switching Digital Zoom from 1X-8X
⯆	Switching Scene mode **(**User mode、Flatland mode、Forest mode**)**

Main menu Description

A ⊥100m	♨	1.0X	White Hot	⬠	📶	🔋	13:26

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DDE ···· 4

📶 ···· ⬤

CVBS ···· ⬤

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⊕ ····Auto

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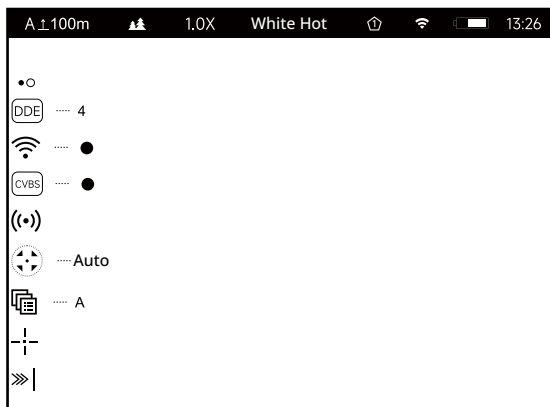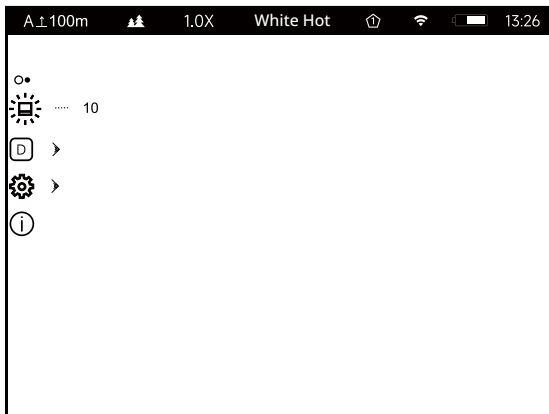
Rangefinder ≫❘	Rangefinder，Long press the menu key (3) to select the ranging icon, align the target to be detected, and the target distance will be displayed on the screen. (Laser ranging power consumption is relatively high, long-term use will reduce the battery life of the device, if you do not need to use please turn off this function) Shortcut key:In the observation state, press and hold the knob switch (3) and turn forward to open. With the distance on, press the knob switch and turn forward to close.

System Settings ⚙	Language ⊕	Change Language,Turn the knob switch (3) to select the desired language and press the switch button to return to exit.
	Time 🕒	Change system time
	Formatting 🖥	Format device storage, (this function will clear all files in the system, including photos and videos, please use with caution)
	Restore Default ↩	Restore all system settings to factory defaults
	Gyroscopic Correction ⤳	Calibrate the gyroscope state and place the machine flat on a level surface.

|	
Accelerometer $((\bullet))$	Used to provide pitch angle information and left/right tilt angle information, long press the menu key (3) to select the accelerometer icon, then the screen will display the pitch angle information and left/right tilt angle information. Shortcut key: In observation state, press and hold the knob switch (3) and turn forward to open. In accelerometer on state, press the knob switch and turn forward to close.
Badspot Repair $\boxed{D}$	Used to eliminate the bad point of the sensor. Long press the menu key (3) to select the bad point repair icon, turn the knob switch (1) to move the XY axis of the coordinate point so that the cursor moves to the bad point, press the menu key (3) to confirm, (restart the device after marking the bad point, at this time, the bad point will be blocked out)
Device Informations $\boxed{\mathrm{i}}$	For viewing device information, long press menu key (3) and turn the knob switch to select device information, you can view, WIFI hotspot name and hotspot, system software version and device MAC address information.
DDE $\boxed{\mathrm{DDE}}$	Used to adjust the thermal sensitivity of the detector, long press the menu key (3) and turn the knob switch to select the device information can adjust the thermal sensitivity of the device, so that the target is easier to be found. There are 1-7 levels to choose from. (Turning up the thermal sensitivity will increase the noise of the screen, please adjust it as appropriate)
Differentiation Setting $\boxed{\text{▥}}$	Used to save the cross differentiation parameters, long press the menu key (3) and turn the knob switch to select the differentiation configurations, there are a total of 26 differentiation configurations from A-Z to choose from, and the information of each configuration is adjusted in the differentiation settings.

Differentiation Setting ⊥	Differentiation switch ⊥	Switch the differentiation switch on or off.
	Differentiation correction ↔↑↓	Correct the position of the differentiation line according to the elasticity point
	magnification ⊕	Zoom correction adjustment screen
	Freeze ❄	Freeze the differentiation window to make it easier to adjust the differentiation position
	Differentiation type ⊥≡	Select different differentiation line styles, there are 6 styles to choose from.
	Differentiated color ⊙	Adjust the underline colour, white, black, or screen reverse.
	Trajectory calculation ⌐	Turn on and off ballistic calculations, or set parameters to calculate ballistics.
Brightness ☀		Used to set the brightness of the icons displayed in the screen, long press the menu key (3) and turn the knob switch to select the brightness of the icons, there are 1-10 levels available, you can adjust the target brightness according to the actual situation.
WIFI 🛜		Used to turn on or off the WIFI hotspot. Long press the menu key (3) and turn the knob switch to select the WIFI switch, turn it on and you can use the mobile phone supporting APP to connect to the device for mobile phone observation of the target.
Shutter Mode ⁂		Used to adjust the shutter mode, long press the menu button (3) and turn the knob switch, select the shutter mode, divided into manual and automatic optional, automatic will be automatically according to the sensor operating state of the flat field correction, manual need to be short press the device switch (1) each time you press will hit the shutter once.
CVBS [CVBS]		For switching on the CVBS switch, long press the menu key (3) and turn the knob switch to select the CVBS switch, switch on the switch and then use the screen that supports CVBS to connect to the TYPE-C port (8) of the device, the device and the screen will display the observation screen at the same time, (if you don't use this function for a long time, please turn off the switch in order to increase the range time)

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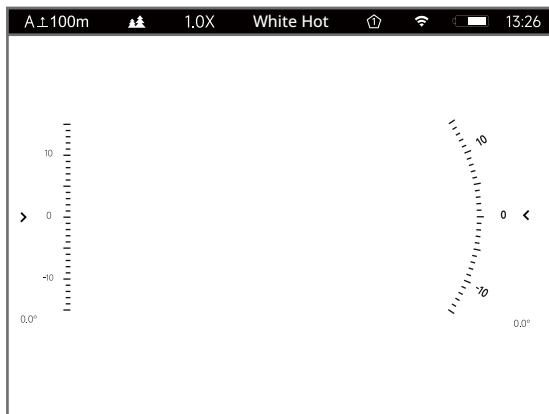
Accelerometer

When the accelerometer function is switched on, the screen will appear as shown above.
-The scale on the left is the pitch angle display, which indicates the vertical angle of the device at this time.
-The scale on the right is the tilt angle display, which indicates the horizontal angle of the device at this time.

Trajectory Calculation

Parameter Configuration	A
Initial speed	610
BC value	1.0
Air pressure	101.1

Temperature	26
Baseline Height	50
Zeroing distance	50
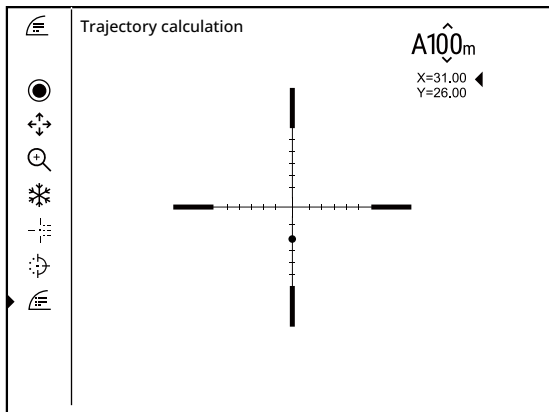
Ballistic Calculation Configuration

- Select the differentiation settings menu in the main menu ┄┆┄ , Select Trajectory calculation 🗐 。

Configure the parameters in the ballistic calculation form, fill in the values according to the actual situation and save. Pay special attention to the setting of the zeroing distance, the zeroing distance is the distance when the gun is calibrated.

-Saved in Ballistic Calculations 🗐 Select 'Open'

-This function requires the laser rangefinder to be switched on, and the device will automatically adjust the height of the dense position according to the distance of the target.

Specification

Lens Focus(mm)	25	35	50	35	50
Field of view °	10.6*7.9	7.5*5.7	5.3*4	12.6*10.1	8.8*7
Target distance (person/m)	2950	3850	5800	3960	6000
	725	1015	1560	1125	1650
	383	506	725	512	780
Response Band	8~14 µm				
Sensor Type	Uncooled Focal Plane Detector				
NETD	< 35 mk (@25°C, F# = 1.0)				
Detector	384*288px 12 µm 50 Hz			640*512px 12 µm50 Hz	
Display	OLED 0.39 1024*768				
Electronic Amplification	×1，×2，×4，×8				
False Colour Mode	Black Heat, White Heat, Red Heat, Iron Red				
Scene Mode	General, plains, forests				
Stopper Control	Manual/Automatic				
CVBS	support				
Removable Battery	support				
Battery Capacity	3000mAh				
Ballistic Calculation	support				
Storage Memory	32G				
Endurance	5H (separate observation time)				
Weight	520g				
Dimension	215*75(mm)				

FCC WARNING

This device complies with part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) This device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

Note: This equipment has been tested and found to comply with the limits for a Class B digitaldevice, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:
—Reorient or relocate the receiving antenna.
—Increase the separation between the equipment and receiver.
—Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
—Consult the dealer or an experienced radio/TV technician for help.

Note: The Grantee is not responsible for any changes or modifications not expressly
approved by the party responsible for compliance. such modifications could void the user's authority to operate the equipment.
The device has been evaluated to meet general RF exposure requirement.
This equipment complies with FCC's RF radiation exposure limits set forth for an uncontrolled environment. This device and its antenna(s) must not be co-located or conjunction with any other antenna or transmitter.